Taxes, Efficiency and Economic Growth

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Introduction

When monetary policy is explicitly committed to maintaining price inflation targets, the scope for contra-cyclical fiscal policy is substantially reduced. While the automatic fiscal stabilizers continue to play an important role in reducing the sensitivity of the economy to shocks, discretionary fiscal policies have only a limited impact, because of induced monetary policy responses.[1] Under these conditions, the analysis of fiscal policies should focus on their effects on the composition of aggregate demand and on the growth of potential output. For example, a policy to deliberately reduce the public debt would, through its interaction with monetary policy, stimulate investment and hence raise potential output growth.

As Canada entered the new millennium, the federal government had achieved a budget surplus, and conditions appeared favourable for increasing potential surpluses (the "fiscal dividend" which is the amount available to the government that can be used for tax cuts or expenditure increases within the

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[1]For a discussion of this issue see Fortin (2001, pp. 181-192).

framework of a balanced budget). Although the current growth recession will reduce the potential surplus somewhat, the medium-term outlook is for increasing surpluses.

The allocation of these potential surpluses is the most important fiscal policy question today. Our view is that, from the standpoint of efficiency and productivity growth, priority should be given to debt reduction and tax reductions designed to stimulate investment and potential growth. In addition, a large part of the remaining fiscal dividend should be allocated towards reducing the relatively large personal income tax burden faced by many Canadian families and individuals. Finally, new spending initiatives should focus on measures to facilitate long-term growth.

While planned debt reduction is an important component of a growth-oriented fiscal policy, in the short run the size of the surplus should vary with the level of economic activity. From a stabilization standpoint, it is important that the automatic stabilizers be allowed to work, so larger than normal surpluses will be realized under strong growth conditions, and smaller surpluses (and even deficits!) when economic growth is below potential (or the economy is in recession).

An Urgent Problem: Economic Growth

Economic growth is the critical issue facing Canada today. Canada's real disposable income per capita has grown little over the past ten years. Moreover, Canada's gross domestic product (GDP) per worker has grown far less quickly than in most Organisation for Economic Co-operation and Development (OECD) countries (see Fortin, 1999). The gap in after-tax per capita income between the United States and Canada has increased by over $4,500 (1998 purchasing power parity) in the past 17 years. Canada's ratio of taxes to GDP (a simple measure of the tax burden) has increased to 37 per cent from 30 per cent in the early 1980s. The tax-GDP ratio in the United States is about 30 per cent, well below that of Canada's.

A critical factor that influences economic growth is productivity growth. Productivity growth implies that Canadians can use fewer resources and work less to produce the same output. It implies, therefore, for the same amount of time worked, Canadians can enjoy higher incomes.

Productivity can be improved in several ways. Canadians can adopt new technologies through innovation that will result in greater amounts of goods and services to be produced from the same resources. Alternatively,

Canadians can improve their education so that they have the skills to produce goods and services with greater value-added. Governments can invest in infrastructure such as transportation and communication networks to improve productivity of the overall economy. While each of these strategies can improve productivity, it is also important to make sure that the tax system is not a barrier to economic growth and job creation as well.

Taxes can impair productivity in several ways:

- Taxes may distort economic decisions resulting in businesses and households taking decisions that fail to make the best use of resources in the economy. As prices are signals used by households and businesses to determine how best to allocate their funds amongst competing uses, taxes that distort prices faced by consumers and businesses result in a less efficient use of resources, and therefore inhibit our productivity.

- Taxes can discourage individuals from acquiring the skills needed in today's workforce and therefore reduce the overall productivity of the economy as a result. They can also discourage individuals from participating in the workforce and reduce work effort.

- Taxes may impair innovation in the economy by discouraging indi-viduals and businesses to create, develop and market ideas or adopt new technologies used by others that would result in greater incomes for workers and supplier of inputs to business.

- In today's global economy, with highly mobile business inputs, taxes that are out of line with other countries that provide similar public infrastructure and training, will discourage business investments. The shift of resources to countries with lower taxes and comparable public services would reduce the productivity of the country with high taxes.

We believe that the fiscal planning issues now facing Canada are of critical importance. With new technologies and forms of business activity that are resulting in increased international integration, capital, businesses and skilled individuals are becoming increasingly mobile. Government tax, regulatory and expenditure policies help to determine how much economic growth and productivity gains can be achieved in the increasingly competitive international arena. Today Canada has an unusual, if not unique, opportunity to put in place reforms, both to the tax system and to expendi-ture programs, in order to stimulate economic growth and productivity over the medium term. We should plan to use the anticipated fiscal dividend wisely, and avoid

squandering this opportunity through piecemeal spending increases and tax cuts.

In this paper, we evaluate how changes in tax policy can improve the productivity of the Canadian economy. In our view, the recent approach of cutting taxes selectively — paying attention primarily to personal taxes — is inadequate. There are a range of urgent and pressing issues that require a *comprehensive* approach to tax cuts — namely, tax reform. Tax reform requires substantial change to not only personal taxes, but also business taxes. An overall approach is required if Canada is to improve its productivity and competitiveness, in order for Canadians to enjoy a higher standard of living.

Tax Reform and Static Efficiency Gains

Business Tax Reforms

Although the focus of the current public debate is on the desirability of personal income tax cuts, improvements in efficiency are more likely to be generated by reform of business taxation. Most economic studies have suggested that the most distortionary revenue sources are related to business taxes, particularly the corporate income tax. Effective tax rates on capital vary by industry, type of asset, size of firm and business organization. The business tax system is not only distortionary but also quite complicated. Some studies have suggested that each additional dollar of corporate income tax levied, causes the Canadian economy to lose nearly $1 in economic output (see Whalley, 1997). Therefore the total cost of raising one dollar of corporate income tax revenue can be about two dollars, once these distortionary effects of the tax are taken into account.

An ideal business tax system would be neutral with respect to different industries, asset types, and degrees of risk. Any non-neutralities in the system should be related to mitigation of the effects of market imperfections. Examples of corrective non-neutralities in the tax system include favourable treatment of small business (to offset capital market rationing) and incentives for research and development (in recognition of the positive spillovers generated by an increase in knowledge or know-how).

In today's world, not only should business taxes be neutral but they should also be levied at rates that are competitive internationally. This is especially important for the corporate income tax. Given the relative ease with

which corporations can shift income from high to low-taxed countries (without changing real economic activity), a country with a high corporate income tax rate could find its tax base eroded significantly. Recent studies have shown that as corporate income tax rates are increased, the gain in revenues is anywhere from 8 to 20 per cent less than what would be expected if the tax base did not change (see Dungan, Murphy and Wilson, 1997; and Jog and Tang, 1997).

Four years ago, the Technical Committee on Business Taxation submitted its *Report* to the Minister of Finance. This report recommended a more neutral business tax system with lower and more competitive tax rates. High effective marginal corporate rates deter investment, and inter-industry and inter-asset variations in these effective rates distort the allocation of capital. Consequently, a reduction in the level of marginal effective tax rates and a reduction in their variance are high priorities from the standpoints of growth and efficiency. The Technical Committee recommended that the general federal corporate tax rate for large corporations be reduced by 9.1 percentage points to 20 per cent and average provincial rates by one percentage point from 14 per cent to 13 per cent. For manufacturing income, the reduction would be only 2.1 percentage points, since the committee also recommended that the manufacturing and processing deduction be eliminated.

This measure above would reduce corporate tax revenues by $2.2 billion in 1997. However, the committee also recommended a reduction in the average corporate tax rate for small business, and a variety of base-broadening measures such that their full set of measures would be approximately revenue neutral.

As the base broadening measures would tend to reduce the inter-market and inter-asset variance of effective marginal rates, the combined package recommended by the committee would improve efficiency.

Since the committee's report was released, developments abroad have made the case for a further lowering of effective corporate tax rates in Canada more important. Within the G7, Japan, Germany and Italy have all reduced effective marginal rates substantially. The United Kingdom, which previously had the lowest effective marginal rate, also reduced its rate by two percentage points. As a result, Canada has become an outlier, with the highest effective marginal rates of any of the G7 countries (except Japan).

Recent reforms in Scandinavia have resulted in companies being taxed at corporate income tax rates below 30 per cent in Finland, Sweden and Norway, and 32 per cent in Denmark. However, the aggressive business tax policies of Ireland are the most important case in point, since Ireland is the fastest growing OECD country of the past decade, virtually doubling its per capita GDP in ten years. While Ireland has reduced tax rates on manu-

facturing and financial service income to 10 per cent,[2] it also eliminated a number of special ineffective preferences for investments. After pressure from the European Union, Ireland is implementing a corporate income tax rate of 12.5 per cent by the year 2004 that will apply to all businesses. As shown later, Ireland and Sweden have a far more favourable tax treatment of investments compared to Canada.

The *Economic Growth and Tax Reconciliation Act* passed by the new Bush administration in the United States did not contain major changes in business taxation. But if additional changes are introduced in the future, there will be increased pressure on Canada to respond as well.

Recent Federal Budget Changes. The 1999 federal budget addressed only a few of the issues raised in the *Report* — the personal tax treatment of offshore investment trusts, a civil penalty on tax advisors who promote fraud and most importantly, a reduction in the corporate tax rate for one highly taxed sector — electric utilities. The changes were fairly minor and were not significant in terms of making Canada's business tax structure more competitive.

The February 2000 federal budget and the October 2000 Economic Statement and budget update, however, did go much further. The government committed itself to a one percentage point reduction in corporate income tax rates for the broad service sector[3] in 2001, followed by four two-percentage point cuts. It indicated that it would reduce the corporate income tax rate from 28 points to 21 points by the year 2004–05 for active business income in non-resource, non-manufacturing sectors. It also increased capital cost write-offs for railway assets, utility equipment and manufacturing equipment subject to obsolescence. The government also introduced a few tightening provisions — tighter thin-capitalization rules for debt owed to related non-residents, the abolition of non-resident-owned companies and adjustments for research and development expense deductions for provincial deductions in lieu of investment tax credit programs.

The February 2000 budget business tax changes took many observers by surprise. The cut in corporate income tax rates, although small in the first year, are significant when fully implemented. The rate cuts, moreover, are

[2]This rate is substantially below the 30 per cent rate for other industries, resulting in less-favourably-taxed industries growing less quickly.

[3]The broad service sector includes all industries except manufacturing and processing and the resource sectors.

focused on the broad service sector, thereby reducing inter-industry distortions. Tax rates on manufacturing and processing income as well as on resource profits would remain unchanged.

The impact of the February 2000 budget changes can be seen in Table 1. The small changes introduced for the year 2001 have little impact on effective tax rates on capital. Significant variation in effective tax rates remain across all sectors. But when the proposed corporate rate reductions are fully in effect in fiscal 2004–05, they have a much more dramatic impact. Most industries, except for mining, oil and gas, and manufacturing, would experience a sharp decline in the effective tax rate by over four percentage points. Although this tax reform is in the right direction, it still leaves considerable variation in effective tax rates on capital across industries and, in some cases, rates remain far too high thereby discouraging investment.

Moreover, these changes will take five years to complete. This is rather disappointing progress given the substantial reforms taking place around the world, as mentioned above. In the near term the Canadian tax system will remain non-competitive as seen in Table 2 and, as discussed below.

In 1996, Canada's effective tax rate on capital invested in manufacturing was comparable to that of the United States and lower than that found in

Table 1: Marginal Effective Tax Rates in Canada: Large-sized Tax-paying Firms (per cent)

	Year 2000	*Year 2001*	*Year 2006*
Forestry	32.5	31.3	26.0
Mining[a]	-13.4	-13.4	NA
Oil and gas[b]	-37.8	-34.4	NA
Manufacturing	24.2	23.5	21.0
Construction	37.3	35.9	28.7
Transportation[c]	28.2	27.1	21.7
Communications	28.5	27.8	21.9
Public utilities[d]	26.1	25.0	21.4
Wholesale trade	34.8	33.2	27.0
Retail trade	34.0	32.5	26.5
Services	28.9	28.4	21.9

Notes: [a] Our simulation shows that, by replacing the federal resource allowance with the deductibility for provincial mining tax and granting the manu-facturing corporate income tax credit (CIT), the effective tax rate (ETR) for mining sector would be about 18 per cent.

[b] Our simulation shows that, by replacing the federal resource allowance with the deductibility for provincial royalty and granting the manufactur-ing CIT credit, the ETR for oil and gas sector would be about 25 per cent.

[c] Estimate for the transportation sector reflects the higher CCA rate for railway equipment (i.e., 15 per cent instead of 10 per cent).

[d] The estimate is made by assuming that 50 per cent of the public utility sector are in the power generating business, which started phasing in the M&P tax credit from year 2000 and may benefit from the higher tax allowance for CCA class 1 (i.e., 8 per cent instead of 4 per cent).

Germany, France, Italy and Japan and higher than rates in the United Kingdom, Sweden and Ireland. The broad service sector was more highly taxed in Canada compared especially to the United States and to most countries, except Germany, Italy and Japan.

In the current year and in 2001, Canada's competitive position will erode as a result of reforms in many countries. In 2000, Canada's effective tax rate in manufacturing, while still comparable to that in the United States, is below only Germany's. However, in 2001, Germany's substantial reform of its system will put its effective tax rate well below Canada's. For services, in the year 2001 Canada's effective tax rate is well above most countries.

With prospective reductions in federal and provincial statutory corporate tax rates, by 2006, Canada's effective tax rate on capital will be competitive with the United States but still above those of the United Kingdom, Sweden and Ireland. However, it is likely that many of these countries will undertake further changes to their corporate income tax systems. It can be expected that in five years further reductions in corporate income tax rates will take place in many countries combined with initiatives to broaden their tax bases.

The Need for Further Reforms. As the full implementation of the Technical Committee's recommended rate reductions would bring Canadian statutory rates well below U.S. rates, it would result in a significant improvement of the competitiveness of Canadians businesses relative to the United States and help combat base erosion. However, even at a combined federal/provincial rate of 33 per cent, the committee's recommendations would place Canada's corporate income tax rate only at the average of the OECD countries.

If all of the Technical Committee's recommendations were implemented, the dispersion of marginal effective rates of tax on capital across industries and assets would be reduced. This should entail some efficiency gains by improving the allocation of capital.

As discussed, these recommendations entail virtually *no* change in *average* effective marginal tax rates. This is not surprising, given the revenue neutral constraint faced by the committee. On the other hand, the February 2000 federal budget cut effective tax rates but failed to move aggressively in reducing non-neutralities and rates. Once the requirement of revenue neutrality is relaxed, it is feasible to design tax reductions to stimulate investment and make the tax system more efficient. We accept the committee's view that R&D already receives extraordinarily favourable tax treatment in Canada. Therefore, our focus should be on stimulating capital investment.

The Technical Committee report was partly criticized for eliminating a number of important special preferences for certain business activities in order to help cover the revenue loss arising from corporate income tax rate

reductions. While general reductions in corporate statutory rates are of benefit to all forms of capital investment, they may result in greater losses in revenue compared to investment tax credits. Some investment tax credits are appropriate since they can encourage investments in specific activities without distorting the tax base used by federal and provincial governments for allocating corporate income to the provinces. In our view, it may be appropriate to consider investment tax credits for certain activities that are insufficient due to market imperfections (undiversifiable risky investments or technology-related investments) and to smooth over transitional impacts of tax reform that eliminates special preferences for specific industrial activities (e.g., new mine assets).

Using the tax evaluation model maintained at the Institute for International Business at the University of Toronto, we have evaluated the impact of reduced statutory rates and investment tax credits on marginal effective rates on investments in new capital.

Table 3 presents effective marginal rates for 2000 (the "base case") and what effective marginal rates would be under four alternatives. The first two incorporate reductions of statutory rates of one and three percentage points. The third incorporates a 1 per cent investment credit for machinery and equipment, and the fourth incorporates a 1 per cent investment credit for all plant and equipment.

The results indicate that a three percentage point reduction in the statutory rate would reduce effective marginal rates in the broadly defined service sector by about two percentage points. Effective rates in manufacturing would drop by 1.7 percentage points. Effective rates in the resource sector would actually increase, because of the interaction of statutory rates with various credits and allowances.

Investment tax credits (ITCs) would reduce the marginal effective tax rate for all industries. A general ITC of 1 per cent has a stronger effect than a 3 per cent rate cut for oil and gas, mining, and transportation and communications; has about the same effect for manufacturing and forestry; and has a weaker effect in the other service sectors and construction. Looking at the inter-industry variability of marginal effective tax rates (METRs), it would appear that a 3 per cent statutory rate cut would reduce these distortions, whereas an ITC would increase them somewhat.

Table 3: Impact of Corporate Tax Changes on Marginal Effective Tax Rates: Large-sized Tax-paying Firms Only (per cent)

	Base Case	*Case 1*	*Case 2*	*Case 3*	*Case 4*
Forestry	32.9	32.1	30.7	32.4	32.0
Mining	-10.6	-8.5	-4.5	-11.1	-12.2
Oil and gas	-19.6	-17.0	-12.2	-20.2	-20.5
Manufacturing	24.6	24.0	22.9	23.1	22.8
Construction	37.9	37.1	35.6	37.7	37.2
Transportation	29.3	28.8	27.8	26.5	26.3
Communications	30.0	29.4	28.3	29.0	27.9
Public utilities	31.8	31.2	29.9	31.0	30.3
Wholesale trade	35.6	34.8	33.4	35.1	34.9
Retail trade	35.1	34.4	33.1	33.8	33.6
Other services	30.1	29.5	28.2	29.5	28.8
Total - Resource	-15.4	-13.0	-8.7	-16.0	-16.7
Total - Non-resource	29.0	28.4	27.2	27.9	27.4
All industries	24.2	23.9	23.4	23.2	22.6

Notes: Base case = The current tax system.
Case 1 = Reduce the corporate income tax rate by one percentage point.
Case 2 = Reduce the corporate income tax rate by three percentage points.
Case 3 = One percentage point investment tax credit for machinery and equipment.
Case 4 = One percentage point investment tax credit for both buildings and machinery and equipment.

International Comparisons and International Competitiveness

In an open economy, the business tax structure must be designed with an eye to the likely response of multinational corporations (MNCs) as well as to its longer term effects on international competitiveness. Attention should be paid to both statutory and effective marginal rates. Statutory rate differentials may provide incentives for MNCs to shift expenses to and income away from high tax reductions, through transfer pricing and debt management practices. Statutory rate differences may also influence location decisions.

Current and projected corporate statutory rates for OECD countries are presented in Table 4. The corporate statutory rate for large manufacturers in Canada lies in the middle of this group of countries, but the statutory rate for large non-manufacturing firms is currently above all the other countries (except for Germany and Japan). Projected rates for 2006 indicate that the Canadian corporate tax rate will be below the level of the United States, Japan, Germany and France, but remain higher than many other countries.

Differences in effective marginal tax rates also provide incentives for MNCs to adjust their *real* capital stocks, increasing investment in countries with relatively low effective marginal rates in relation to other countries.

In order to prevent substantial revenue erosion, statutory rates should not be higher than rates typically found in other industrialized countries where MNC investments take place. In order to stimulate investment and provide economic growth, effective tax rates on capital should be lower than in other competing jurisdictions.

The implementation of the Technical Committee's recommendations regarding statutory rates would establish Canada's rates at the OECD average and well below U.S. statutory rates, thereby eliminating the principal sources of revenue erosion via debt shifting and transfer pricing. However, as noted above, the February 2000 budget will reduce effective marginal rates of tax on investment by four percentage points for service sectors but have little impact on manufacturing and resource sectors.

A reduction in the combined general corporate income tax rate to 30 per cent instead of 32 per cent accompanied by base-broadening would reduce typical marginal effective tax rates for non-resource firms by about 1 to 1.5 percentage points. The lower statutory rate would also make Canada more attractive relative to other countries, providing added deterrence to debt shifting and transfer pricing by MNCs.

Table 4: Statutory Corporate Income Tax Rates in Selected OECD Countries[a]

	July 31, 1996	*January 1, 1999*	*Change*	*Intentions (year)*
Australia	36	36.0	-	30.0 (2000)
Canada[b]	34.9/43.2	35.0/43.3	-	32.0 (2006)[c]
Denmark	34	32.0	–	
France	41.7	36.7/40.0[d]	–	37.8 (2000)
Germany	56.1	51.9[e]	–	35.0 - 38.0 (2001)[f]
Ireland	10.0/38.0	10.0/28.0	–	12.5 (2003)
Italy	53.2	31.3 - 41.3[g]	–	
Japan	52.2	48.0	–	41.0 (2000)
Netherlands	37.0/35.0	35.0	–	
Norway	28.0	28.0	-	
Poland	40.0	34.0	–	22 (2004)
Sweden	28.0	28.0	-	
Switzerland	35.5	25.1	–	
Turkey	44.0	33.0	–	
United Kingdom	33.0	30.0[h]	–	
United States[i]	39.2	39.2	-	

Notes: [a] The 1996 rates are based on the former Coopers & Lybrand, *1997 International Tax Summaries* and the 1999 rates are adopted from the KPMG, *Corporate Tax Rates Survey*, January 1999, unless otherwise specified.

[b] The rate is a combination of the federal CIT rate (22.1 per cent and 29.1 per cent respectively for manufacturing and others) and the average of provincial CIT rates weighted by the provincial GDP by industry. The minor difference between the two years reflects some changes in provincial CIT rates.

[c] This is a weighted average of all industries. Note that the current general CIT rate of 43 per cent will still be applicable to the resources sector, which also enjoys various preferential tax treatments unavailable to any non-resource sectors.

[d] The rate is a combination of the corporate income tax rate of 33.33 per cent and the surtax of 10 per cent and 20 per cent respectively. The lower surtax is applied to smaller-scaled firms which are mainly owned by individuals. For the year 2000 and future years, the lower rate will apply to all firms. (See Ernst & Young, *1999 Worldwide Corporate Tax Guide*, for details.)

[e] Our estimate is based on Ernst & Young, *2000 Worldwide Corporate Tax Guide*. It includes a corporate income tax rate of 40 per cent, an average trade tax of 16.75 per cent (ranged from 13 per cent to 20.5 per cent) which is deductible for the CIT purpose, and a surcharge of 5.5 per cent on CIT payable.

[f] Refer to *Tax Notes International*, Vol. 20, No. 4, 24 January 2000.
[g] The higher rate (41.3 per cent) includes a general corporate income tax rate of 37 per cent and a regional tax of 4.25 per cent. The latter is levied on the Italian-source income from productive activities, which includes interest payments and labour cost. The general CIT rate may be reduced to 19 per cent for qualifying taxable income corresponding to the ordinary remuneration (currently 7 per cent) of the net equity increase. However, the average corporate income tax rate for a company may not fall below 27 per cent, which, combined with the regional tax rate of 4.25 per cent, resulted in the lower aggregated income tax rate of 31.3 per cent.
[h] Effective as of April 1, 1999.
[i] Our estimate based on an average state corporate income tax rate of 6.5 per cent (ranged from 1 to 12 per cent).

Because a reduction in corporate statutory rates would stimulate an increase in the tax base, the revenue costs would be somewhat attenuated. The Technical Committee estimates that the elasticity of the corporate tax base with respect to a reduction in tax rates is about 0.15. Based on this elasticity in 1998, for example, a two percentage point reduction in all corporate tax rates would involve a revenue loss of about $1.3 billion of federal corporate tax revenue (representing about 7 per cent of federal corporate tax revenues).[4] In future years, however, this relative revenue loss would be further attenuated, as the lower corporate tax rates lead to higher investment, a higher capital stock, and hence increased labour productivity and real output.

Impact of Corporate Taxes on the User Cost of Capital and Investment

The corporate tax structure is a major determinant of the "user cost" of capital.[5] Reductions in statutory corporate rates, increases in CCAs, or increases in investment tax credits will each lower the user cost of capital. Except for the special case where capital is not substitutable for other inputs, a reduction in the user cost will stimulate real investment.

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[4]This revenue loss is less than the fiscal cost estimate derived from Department of Finance Canada (1999, p. 113).

[5]Other factors include the real rate of interest and the relative prices of capital goods.

In the FOCUS macro-econometric model, maintained by the Institute for Policy Analysis of the University of Toronto, variations in these key tax parameters affect investment in machinery and equipment and non-residential structures. Since we recommend reductions in statutory rates, we implement these measures in the FOCUS model to incorporate their net impacts on each category of investment and on the corresponding capital stocks.

As noted earlier, higher rates of investment will gradually increase the capital stock, thereby raising potential growth and labour productivity. Higher future levels of output will affect most major revenue sources. These longer term "tax recaptures" will reduce the future revenue losses from the tax reduction measures. The results of this analysis are reported in the section below on "Allocating the Fiscal Dividend: Economic Effects".

Summary of Recommendations for Corporate Taxes

We support the implementation of the seven percentage point reduction in the general corporate rate in the February 2000 federal budget, as laid out in the October 2000 Statement. The first one percentage point rate reduction already took place on January 1, 2001 and the minister of finance confirmed in his May 2001 *Economic Update* that further cuts of two percentage points in each of the following three years will proceed as planned. These reductions are a start in reforming the corporate tax, but further changes are still required. Specifically, we recommend that the minister:

- Implement the base-broadening and other recommendations of the *Report* of the Technical Committee (including the elimination of the 4 per cent corporate surtax). This will permit additional reductions of federal and provincial statutory rates, bringing the combined rate close to 30 per cent.

- Provide selective investment credits that provide transitional relief for industries adversely affected by these reforms.

Reducing Effective Marginal Personal Income Tax Rates

Personal taxes affect productivity in several ways. Personal taxes assessed at high marginal tax rates — the percentages of additional income that is taxed through income, sales, payroll and other taxes that affect the individual — can discourage work effort, savings, risk taking and entrepreneurship. High taxes, relative to the public services that such taxes fund, can dis-courage individuals from moving to Canada or encourage Canadians to move to other countries.

In international comparisons within the OECD or G7, Canada stands out as: having a relatively high rate of personal income taxes as a percentage of GDP; and having increased the personal income tax burden the most over the past decade.

These comparisons refer, of course to *average* burdens, and are related to *average* rates of tax. When one examines individuals and families in different circumstances, and when effective marginal rates are brought into the picture, the case for personal tax reform and personal tax reduction is even stronger.

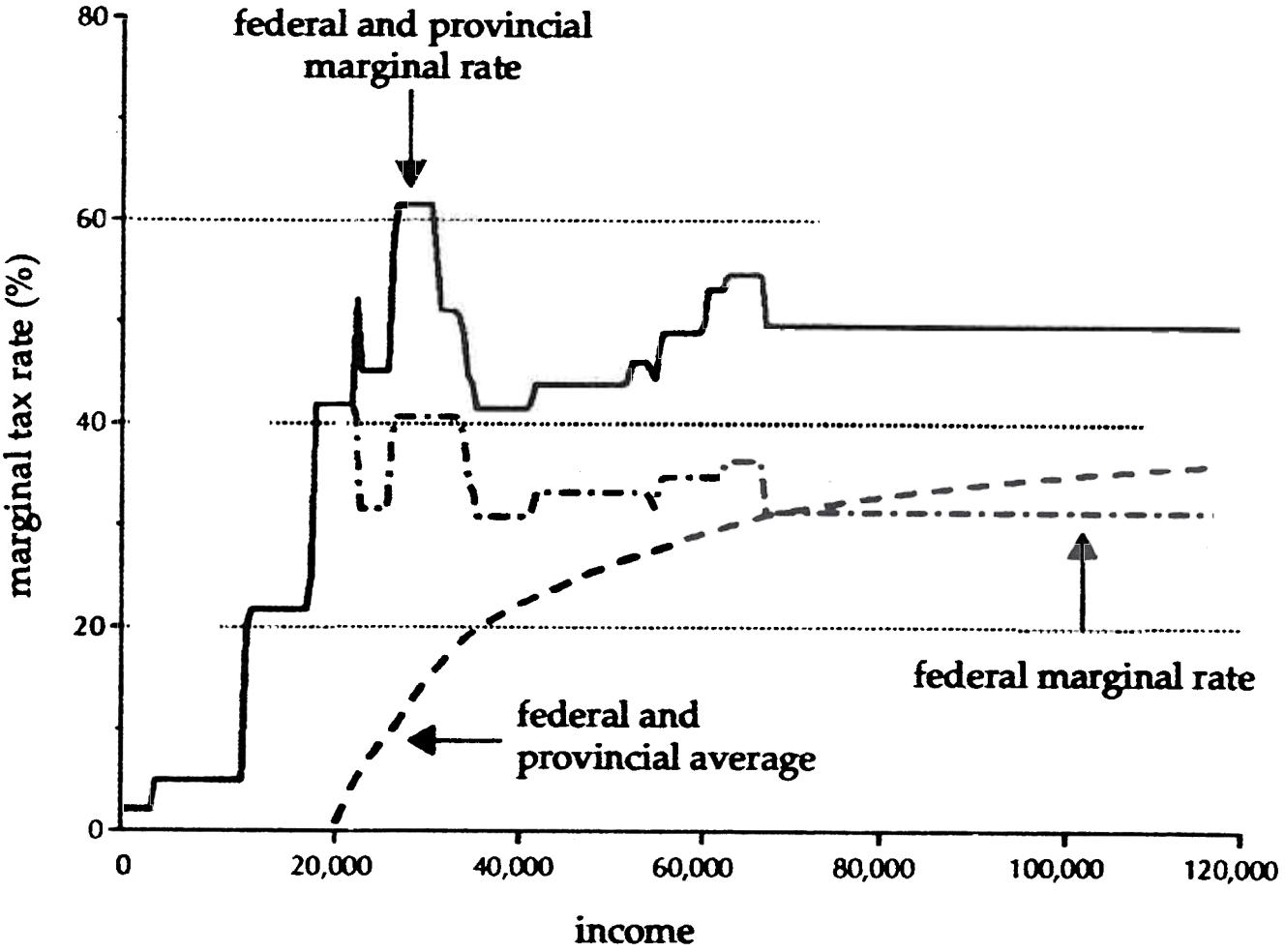
Canada is unique among leading industrialized countries, in that children are not recognized as affecting the ability to pay income taxes. Rather, Canada relies solely on the so-called "Child Tax Benefit", a transfer payment system with clawbacks that reduce and eventually eliminate the benefit once certain threshold levels of income are reached. Unlike most other OECD countries, Canada's personal income tax (PIT) is basically on an individual basis. This has the consequence that a family's tax burden does not just depend on the family's level of net income, but varies with the *distribution* of income within the family. A family with a single earner therefore faces a considerably higher burden than a family with the same income earned by two or more family members.

The clawbacks of the Child Tax Benefit and other transfers and credits as well as payroll taxes raise effective marginal rates for low and moderate income families. These and other anomalies in the existing tax-transfer system have been examined in recent papers by Mintz and Poschmann (1999) and by Wilson (1998). Figure 1, reproduced from Mintz and Poschmann, shows the current effective marginal rates for a single earner family in Ontario. As illustrated, the highest effective marginal rate — about 60 per cent, is faced by a family earning about $25,000! This is the direct result of the interaction of clawbacks of transfers with the PIT.

Chart 1:

Marginal and Average Tax Rates in Ontario

for a Single Earner with Two Children, 1999



Source: Reproduced from J. M. Mintz and F. Poschmann, *Tax Reform, Tax Reduction: The Missing Framework*, C.D. Howe Commentary No. 121, February 1999, Figure 1, p. 15.

Wilson examined the interaction of clawbacks of pensions for seniors with the PIT. As illustrated in Figure 2, even more anomalous rates are faced by seniors with low incomes. The interaction of the clawback of the GIS with the first bracket of the PIT produces effective marginal rates as high as 75 per cent! At higher income levels, seniors face effective marginal rates seven to eight percentage points higher than top marginal rates for other taxpayers, as a result of the 15 per cent clawback of Old Age Security (OAS).

In 1987 Canada implemented a major reform of the income tax system, which had as a major objective reductions in marginal rates and a simplified system of three rate brackets. Over time, the system has become more complex, with federal and provincial surtaxes and clawbacks creating many additional effective rate brackets (Macnaughton, Matthews and Pittman, 1998).

Federal surtaxes, higher provincial tax rates, and provincial surtaxes increased the top marginal rates well above the 43.5 per cent level envisaged in the 1987 reform. As important, the effect of the partial de-indexation of the PIT — implemented in 1985 — has gradually eroded the real value of personal credits and deductions, and the real size of the income tax rate bracket thresholds.

In recent years, Ontario has implemented a major reduction in provincial PIT rates, while other provinces have put in place more modest reductions, and the general federal surtax has been eliminated. Alberta has implemented a flat tax of 11 per cent, which results in a top marginal rate of 41 per cent in 2001. While these measures represent steps in the right direction, the PIT in Canada nevertheless remains steeply progressive, with individuals earning the average industrial wage facing combined marginal income tax rates of 35–40 per cent,[6] and the top marginal rate (including federal and Ontario surtaxes) kicking in at an income level just above $63,000.[7]

The February 2000 federal budget and the October 2000 Statement have begun the process of reducing marginal rates, through the elimination of the "high income" surtax and reducing middle bracket rates. Furthermore, the restoration of full indexation will halt the "bracket creep" that was a major factor in the past increase in personal tax burdens. The measures

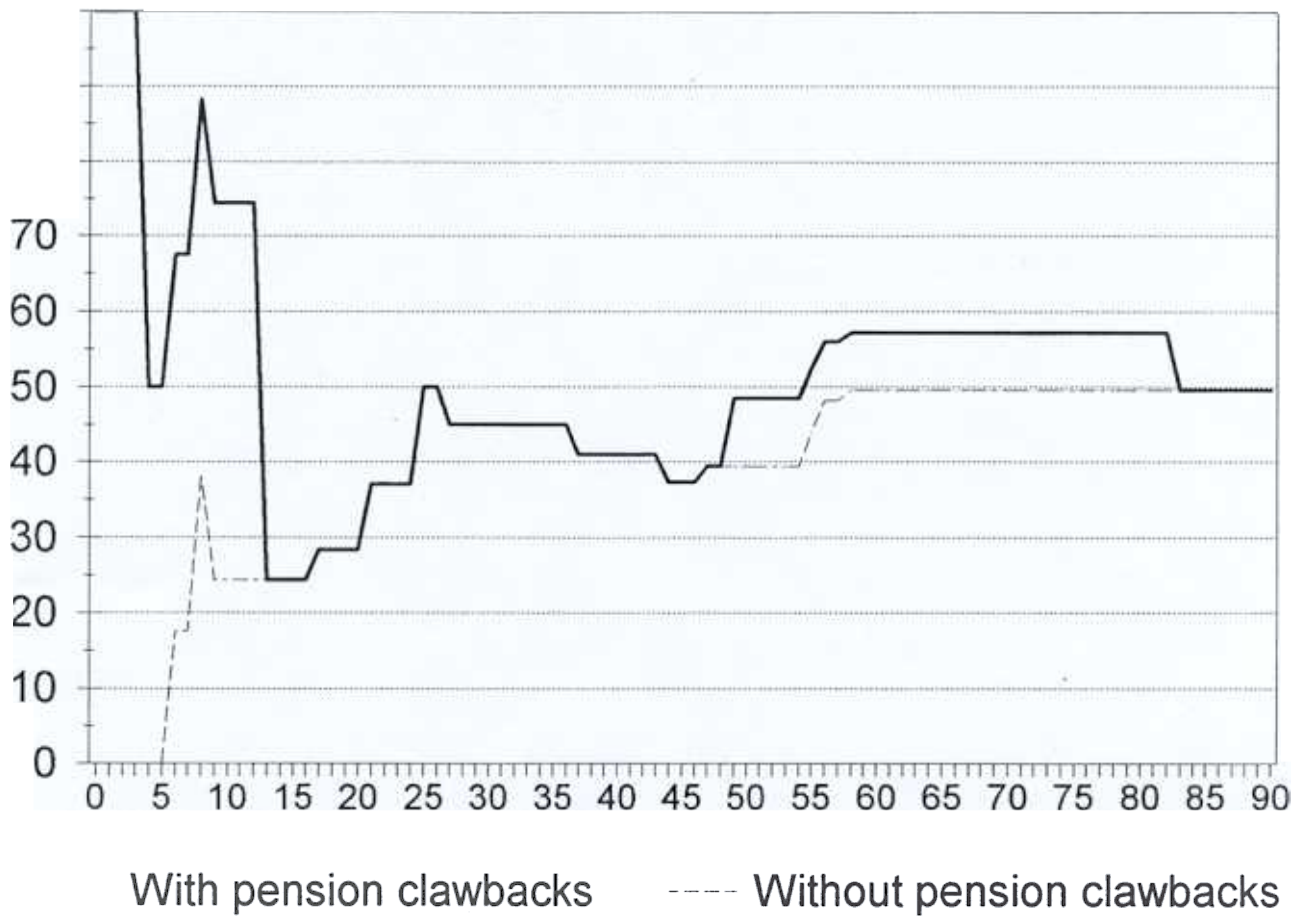
[6]As noted above, when clawbacks and payroll taxes are taken into account, effective marginal rates are higher.

[7]For individuals with employment income, the top marginal rate takes effect at an income level of $63,671 in 1999 in most provinces. British Columbia, New Brunswick and Nova Scotia have surtaxes that kick in at higher income levels (see KPMG, 2000, p. 13).

Chart 2:

Marginal Tax Rate (%), Single Senior (Ontario),

by Income ($000) Level: Current System



Source: Reproduced from T. A. Wilson "The Proposed Seniors Benefit: An Evaluation" *Report of Proceedings of the Forty-Ninth Tax Conference*, Canadian Tax Foundation, 1998, Figure 1, 26:11.

implemented in the budget plan (including the measures in the five-year plan) would reduce personal taxes as a per cent of GDP by about one percentage point (of which indexation accounts for roughly one-half). The February 2000 budget and the October 2000 Statement therefore represent an important start. However, further measures will be needed to bring Canada's relative PIT burden closer to those of our international trading partners.

Income Taxes, Consumption Taxes and Savings

The personal income tax in Canada has long been a "hybrid" tax which has elements of a consumption base as well as an income base. The exclusion of imputed rent on housing and other consumer durables places the taxation of these consumer assets essentially on a consumption base. The deductions for Registered Retirement Savings Plan (RRSP), Deferred Profit Sharing Plan (DPSP) and Registered Pension Plan (RPP) contributions eliminate the double taxation of savings invested in these registered plans. However, as the yield on other assets held outside these plans is subject to income tax, considerable double taxation of savings remains under Canada's PIT.

The pension reform of 1990 promised to level the playing field for contributors to RRSPs and members of RRPs. Contribution levels were to be equalized and indexed. However, indexing has been repeatedly postponed, and the current RRSP limit is below the threshold for deemed equivalence to defined benefit pension plans. A key savings incentive in the PIT has gradually been eroded as a result.

Indexing of RRSP/RPP contribution limits has been repeatedly postponed in various federal budgets. Currently, indexing is scheduled to begin in 2004. Furthermore, the contribution limits were rolled back below the $15,500 level originally proposed to $13,500 currently.

The steady erosion of the contribution limits in the absence of indexation has shifted the PIT more towards an income base and away from a consumption base. This erosion may have contributed to the recent declines in personal savings rates.[8] In addition, the growth of PIT revenues relative to revenues from indirect taxes on consumption (the GST and federal excise taxes) has shifted the relative weight of total federal taxes from consumption to savings.

[8]However, other factors, in particular the increased importance of capital gains relative to other income, have probably been more important.

It is important to halt, at least, this shift of taxation from consumption to savings. This can be accomplished by concentrating further tax reductions on the PIT, and increasing savings incentives within the PIT. As noted above, the February 2000 federal budget has implemented PIT reductions and has restored full indexation for credits and rate brackets. However, the budget did not increase RRSP/RPP limits.[9]

Entrepreneurship, Innovation and Risk-taking

A significant factor underlying productivity is the willingness of entre-preneurs to innovate and take risks. Innovation is the process whereby individuals (and businesses for that matter), are able to make better use of resources so that more output can be produced from the same amount of labour and capital used in the production process. Part of the innovation process is related to research and development that result in cost-saving technologies or new products. However, innovation depends on more than just research and development. It also depends on individuals acquiring knowledge and skills to develop and use new technologies. Innovation is also related to the ability of individuals to develop new forms of organization and business management, which help improve the capacity of businesses to compete in today's global economy.

It has been shown that Canada, despite having one of the richest R&D incentive systems in the world, has a mediocre rate of research and development. It has also been shown that Canada has been fairly successful at cost-savings innovations but not product development (Trefler, 1999). Is this a result of inadequate incentives for research and development (note that Canada's generous tax incentives apply equally to both forms of research and development)? Or do the lack of product development innovations reflect a wider problem in the tax system? As the Technical Committee notes in its report, innovation depends not only on the incentive for entrepreneurs and businesses to develop new products and cost-savings processes but also on the demand by business to adopt such innovations.

We believe that the business tax measures, recommended in the first part of the report, would encourage both innovation and risk-taking by reducing the overall level of taxes, especially on the knowledge-based part of the economy, while leaving Canada with one of the most generous incentives for research and development in the world through the tax credit mechanism.

[9]The budget did raise the foreign content limit for RRSPs and RPPs from 20 per cent to 30 per cent over two years. This measure should improve risk-adjusted rates of return within registered plans.

However, additional incentives are needed in the PIT to encourage entrepreneurs to undertake innovative activity and risk-taking. There are two key elements. The first would be a reduction in the overall personal tax rates that, as a result of high marginal tax rates, discourages investment, risk-taking and work effort. The second would be new capital gains tax incentives that do not inhibit the ability of firms to grow as well as encourage risk-taking.

There are three particular issues related to the taxation of capital gains:

- First, capital gains taxes are applied to realizations, with the con-sequence of encouraging investors to "lock-in" holdings rather than sell them to buy more productive assets. Although the investor is able to defer tax on capital gains by holding assets rather than selling them, the "lock-in" effect can impede dynamic efficiency by discouraging the rebalancing of portfolios from poor to better quality assets. (There are restrictive circumstances in which investors can sell assets and defer capital gains taxes to a later time through the use of the "rollover" provisions in the income tax system).[10]

- Second, capital losses generally can only be used to reduce capital gains for tax purposes. There are many circumstances in which capital losses cannot be used at all. Even if the capital losses can be used, they are carried forward at no interest, so that the time value of the losses are reduced the longer it takes to use up the losses. The lack of full refundability of losses reduces the incentive to invest in risky ventures since governments also share the gains but not the losses.[11] Although one could allow capital losses to be used to reduce other income, there are potential significant tax revenue losses if investors time the sale of their assets to shelter non-capital income from tax.

- Third, capital gains are taxed without accounting for the effects of inflation on the value of the original cost of the investment. Without indexation of capital gains for inflation, the effective tax rate on capital gains is increased. This is partly, wholly or more than wholly offset by the deferral of taxes on capital gains, since the capital gains taxes are only

[10]Note that if the capital gains tax applied to accrued, rather than realized gains, there would be no "lock-in" effect since taxes could not be postponed.

[11]See Mintz and Wilson (2000a). We show that the incidence of capital losses relative to gains has been relatively high for investors with less that $100,000 in income.

paid when assets are disposed of rather than on the accrued gain as the value of the assets increase year by year. The impact of inflation on the cost of holding assets subject to capital gains taxation is also offset by the degree to which individuals borrow money to purchase the asset, since the interest expense is deductible without adjustment for inflation. The degree to which the deferral of taxes on gains and the lack of adjustment for inflation affects the overall tax rate, depends on the length of time that assets are held and the rate of inflation.

Generally, the above first two issues and possibly the third suggest that capital gains should be effectively taxed at a lower rate than ordinary income. However, there is another constraint facing the government in that it is relatively easy to convert higher taxed forms of income, particularly dividends, into capital gains. Governments have tried to reduce complexity in the tax system by ensuring that dividends and capital gains are taxed at similar rates — otherwise, complex anti-avoidance rules are required to prevent dividends from being converted into capital gains. However, until the recent changes in capital gains taxation in Canada, dividends were taxed more lightly than other forms of income, since individuals received a dividend tax credit to reduce personal taxes owing on dividends. The purpose of the dividend tax credit is to integrate personal and corporate income taxes on distributed income.[12] Thus, the role of the partial exclusion of capital gains from income is also to integrate corporate and personal taxes on profits reinvested in the corporation that result in an increase in the value of the corporate equities. In the year 2000 in Ontario, the combined federal/provincial top personal income tax rate was 48 per cent. Dividends, net of the credit, were subject to a tax rate of 32 per cent while the capital gains tax rate was 36 per cent, after applying the one-quarter exclusion rate of capital gains. Thus, to equalize taxes on capital gains and dividends, it was appropriate to increase the exclusion rate from one-quarter to one-third, assuming no other changes in the tax system. This reform was included in the February 2000 federal budget. However, if there are further reforms to lower personal tax rates or changes to the corporate income tax rate for small business income, then further adjustments in the dividend credit rate and the capital gains exclusion rate would be appropriate. As we have noted elsewhere (Mintz and Wilson, 2000a, p. 25), with general reductions in corporate and personal rates, the

[12]The dividend tax credit is set to integrate corporate and personal taxes at the small business level, which is subject to tax at a federal and provincial average rate of about 20 per cent.

capital gains inclusion rate could be reduced to one-half. The October 2000 Statement reduced the capital gains inclusion rate to one-half, but did not adjust the dividend tax credit. As a result, effective tax rates on capital gains are now *below* effective tax rates on dividends, reversing the situation in effect before the February 2000 budget.

Canada also provides an incentive for individuals to hold farm property and shares in qualifying Canadian-controlled private corporations through the $500,000 lifetime capital gains exemption. Prior to 1994, a general $100,000 lifetime capital gains exemption was also available for the holding of all assets but was found to be ineffective in encouraging investment and risk-taking (Mintz and Richardson, 1994, p. 15). The current exemption is provided with the aim of giving farmers and small business owners an opportunity to save income for retirement since it is not possible for these individuals to use the current RRSP system for tax-assisted retirement savings since they would need to have earned income to access the system.

The existing $500,000 lifetime capital gains exemption, however, is inefficient and unfair. The exemption can be used by owners to restructure large businesses so long as the shares qualify for the exemption. The exemption also impedes the growth of companies since it is only available for shares of private, not public corporations. Further, the exemption provides those individuals who have adequate access to the existing RRSP/RPP system from other earned income a greater opportunity to save for retirement purposes by holding qualifying farm property and private corporate shares as well as their RRSP or pension assets.

The Technical Committee on Business Taxation recommended the replacement of the lifetime capital gains exemption with an enhanced RRSP system that would give farmers and small business owners opportunities to save income for retirement by rolling over their gains into RRSPs, up to a limit that depends on the years in which the assets are held and the degree to which savings have not been invested in the RRSP system. We would endorse this proposal.

The February 2000 federal budget has introduced a rollover provision for investments in qualifying small business shares. This measure should improve small business access to venture capital. However, other incentives might be considered to encourage the growth of smaller businesses. For example, one important incentive, used in the United States, is to provide favourable capital gains treatment for small businesses that issue shares to the public for the first time (Brown, Mintz and Wilson, 2000). One could also provide greater room for individuals to save for retirement purposes by expanding RRSP limits for the ownership of certain assets, such as venture capital.

Summary Recommendations for Personal Income Taxes

A large part of the fiscal dividend should be allocated to personal income tax reforms that entail significant reductions in average tax burdens. A program for tax reform needs to be designed, and it should be gradually implemented as the potential fiscal dividend grows.

Our priorities for this program are:

- The steeply progressive rates faced by low and middle income families need to be reduced by:
  - ® modifying clawbacks (and/or lowering the first bracket rate) so that no one faces a marginal rate higher than the richest Canadian,
  - ® reducing the middle bracket rate,
  - ® widening the first and second brackets to gradually restore their real values towards 1985 levels,
  - ® restoring full indexation of the basic amounts and rate brackets, and
  - ® eliminating the 5 per cent high income surtax.

- Children need to be recognized as affecting ability to pay income taxes. An indexed "amount" subject to credit should be available for each child in a family.

- RRSP limits should be increased to $15,500 and fully indexed from now on.

A start has been made in implementing many of the aspects of this program. The February 2000 federal budget reduced the middle bracket rate to 24 per cent, and an additional reduction to 23 per cent is part of the announced five-year reduction plan. The October 2000 Statement implemented a further reduction in the middle bracket rate to 22 per cent, and created an additional upper middle bracket with a rate of 26 per cent. As of January 1, 2001, the top marginal rate of 29 per cent kicks in at an income of $100,000. The budget also restored full indexation of basic amounts and rate brackets, and the five-year plan promises a modest widening of the rate brackets. In addition, following the October 2000 Statement, the 5 per cent surtax, which was to be phased out in the five-year plan, was eliminated effective January 2, 2001. However, more still needs to be done. Neither the budget nor subsequent statement did anything about the clawbacks. And the

widening of the tax brackets and credits in the five-year plan is insufficient to restore them to their 1985 values in real terms.

As discussed below, the remaining required changes cannot be implemented all at once, but should be feasible within the context of a five-year fiscal plan.

More fundamental reforms should also be considered. The tax treatment of the family needs to be reviewed, with an eye towards reducing, if not eliminating the effects of within family income distribution on net taxes paid. The integration of personal and corporate taxes and the tax treatment of capital gains should be modified to eliminate fully the double taxation of corporate source income, and to reduce the rate of tax on dividends accordingly. Further rate reductions should be considered, particularly for the lowest income bracket,[13] to encourage participation in the workforce.

Payroll Taxes

Payroll taxes in Canada are lower than in most other industrial countries. However, it should be noted that these taxes generally finance social insurance benefits — primarily public pensions, and unemployment benefits. While the linkages from taxes to benefits may be loose for some individuals,[14] there are recognized benefits financed, in large part, by earmarked taxes. As a result, the much higher payroll taxes in Europe mainly reflect the higher social insurance benefits paid there. Similarly, higher federal payroll taxes in the United States reflect more generous U.S. social security pensions relative to Canada/Quebec Pension Plans (CPP/QPP) pensions.

In 1997, the federal and provincial governments reached an agreement to ensure the long-run financial viability of the CPP. Although there were some modest reductions in benefits, most of the reduction in the unfunded liability of the CPP was to be effected by a 65 per cent increase in CPP payroll tax rates, to be phased in over the 1998 to 2003 period. While alternatives to this approach have been put forward (Dungan, 1998; Pesando, 1997), in this paper we accept the CPP payroll tax increases as a given.

Dungan's (1998) examination of the economic effects of the scheduled CPP/QPP payroll tax increases indicates that, even when the payroll tax increase is fully shifted to workers in the long run, there are nevertheless

[13]The October 2000 Statement reduced the first bracket rate by one percentage point, effective January 1, 2001.

[14]In Canada, for example, unemployment benefit payments are partially clawed back for individuals with income above a threshold.

adverse transitional effects that reduce aggregate output and cause job losses. These effects would be mitigated or eliminated if other payroll taxes were reduced as the CPP rate increases take effect. The obvious candidate for this role is the EI contribution rate. At present the Employment Insurance (EI) "Fund" has a large accumulated surplus, and EI revenues exceed unemployment benefits and other outlays by $5–6 billion per year. As it is the employer portion of payroll taxes that generates the adverse transitional economic effects, and as employer EI payroll taxes are 1.4 times employee contributions, and apply to a higher income level than CPP contributions, a given CPP rate increase for employees can be offset by a smaller employee EI rate cut.

One approach, which was recommended by the Technical Committee, is to implement a limited form of experience rating via selective reductions in the employers' portion of the EI tax. We would strongly endorse this recommendation, which would improve labour-force adjustments and reduce the unemployment rate over the medium term. However, if limited experience rating is rejected, the overall EI rate should be reduced as a second-best alternative. For example, if the basic EI contribution rate for employees were reduced by 20¢ per year over the three-year period 2001–03, this would offset most of the adverse transitional effects of scheduled increases in CPP/QPP contributions (Dungan, 1998).

The Room for Tax Reductions: An Illustrative Exercise

In 1999 Finance Canada engaged four forecasting organizations to develop estimates of the potential surplus (or "fiscal dividend") that would be generated over a five-fiscal-year period (2001–02 through 2004–05). These estimates were developed on the basis of a common set of economic projections — the so-called "consensus" or average of forecasts of private sector firms and organizations — and a common set of fiscal assumptions. They have served as the base for all subsequent discussions about the utilization of the fiscal dividend and are still a useful reference point today. Beyond the fiscal measures already put in place by past budgets, these fiscal projections entail no change in basic tax rates, and program spending (other than EI and OAS/GIS payments) held constant in real per capita terms.

The average results of this exercise were published by the Department of Finance in the *1999 Economic and Fiscal Update* (Canada, Department of Finance, 1999, p. 80). We reproduce the average projected potential

surpluses in the first line of Table 5. As is shown, the projected fiscal dividend steadily increases, reaching a level of $30 billion in 2004–05.

PEAP was one of the four forecasting/modelling organizations involved. The projected potential surpluses, that PEAP developed for this exercise are presented in the second line of Table 5. While these near-term estimates are close to the average, in the later years, the PEAP model generates a larger fiscal dividend, reaching $33 billion in 2004–05. This result reflects more buoyant corporate tax revenues, somewhat higher EI revenues and lower EI payouts in PEAP's analysis.

These projections, although published in November 1999, were constructed using information available in September 1999. The economic outlook improved significantly in the intervening months as reflected in forecasts published by *Consensus Economics*, and in various statements published in the financial press.

PEAP released a long-term economic forecast on November 10, 1999, which incorporated this additional information. We then reconstructed the fiscal dividend projection, using this long-term economic projection, but maintaining the same fiscal assumptions as in the September 1999 exercise. These results are shown in the third line of Table 5. The potential surplus over the first three years is increased by $1 billion to $1.5 billion per year.

Table 5: Total Fiscal Dividend ($ billion)

Fiscal Years:	*2000–01*	*2001–02*	*2002–03*	*2003–04*	*2004–05*
Based on September 1999 "average" forecast					
Average of 4 modelers	9.9	13.6	18.5	24.4	30.1
PEAP	10.3	14.5	20.4	26.8	33.0
November PEAP forecast (with Finance fiscal)	11.5	16.0	21.2	26.5	33.1
Pre-budget PEAP analysis [a]	12.7	16.5	22.0	29.1	35.5
Post-budget PEAP analysis	7.3	6.3	7.3	10.0	13.8

Note: [a] The projections were updated on the basis of the fourth quarter National Accounts data. Fiscal projections were based on the growth rates of the previous projection.

But in the last two years (2003–04 and 2004–05) there is little difference between the November and original estimates. This shows that projections of the out-years in a medium-term forecast are not terribly sensitive to small differences in the starting point.

With the release of the fourth quarter 2000 National Accounts data, and revisions for the previous three quarters, we updated these fiscal projections (maintaining the same fiscal assumptions). These results are shown in the fourth line of Table 5. As shown, the potential surplus is higher in every year of the analysis, but again not greatly so.

The February 2000 budget introduced a number of tax reductions. It also included spending initiatives, many of which were pre-booked to fiscal 1999–2000. There were also spending initiatives announced prior to the budget, but after the November statement, and an EI payroll tax cut on January 1, 2000. Two important measures in the budget offset the medium-term fiscal outlook: full indexation of the basic amounts, and rate brackets was restored,[15] and the five-year tax reduction plan was announced.

We have implemented all of these measures in our analysis of the budget. As no time pattern for future tax reductions was announced in the February 2000 budget, we assume that all future tax cuts are smoothly implemented over the five-year period. Consistent with the assumption in the budget (and with past behaviour) we assume that debt reduction is limited to $3 billion per year. When the budget measures are incorporated, the estimated fiscal dividend is reduced, but not eliminated, as shown in line 6 of Table 5.

A key assumption in the construction of these potential surplus estimates was that debt reduction would be $3 billion per year. Debt reduction obviously affects the magnitude of potential surpluses in the later years by reducing future interest payments to service the debt.

Table 6 presents an analysis that allows for larger debt paydowns, particularly in the early years. As a result, the potential surplus generated is somewhat larger in 2004–05 at $14.3 billion, about $0.5 billion higher than with the steady $3 billion per year debt paydown assumed in the projections of Table 5.

We believe that a strong case can be made for larger planned debt paydowns in the early years. As shown in Table 6, if debt reduction is

[15]In addition, various refundable tax credits, and clawback thresholds were fully indexed.

Table 6: Derivation of Room for Additional Tax Reductions: PEAP Post-Budget Analysis ($ billion)

	2000-2001	*2001-2002*	*2002-2003*	*2003-2004*	*2004-2005*	*Cumulative 5 year Totals*
Total post-budget fiscal dividend (Table 5 line 5)	7.3	6.3	7.3	10.0	13.8	44.7
Debt paydown	6.0	6.0	5.0	4.0	3.0	24.0
Amount generated by additional debt reduction*	0.1	0.3	0.4	0.5	0.5	1.8
Adjusted fiscal dividend	7.4	6.9	7.7	10.5	14.3	46.5
Room for additional tax reductions	1.4	0.9	2.7	6.5	11.3	22.8

Note: *This is the interest on the additional debt reduction above $3 billion per year.

doubled in the first two years, and then gradually reduced to $3 billion by 2004–05, the future potential surplus would be increased.

We view debt reduction, particularly in the early years, as important for the following reasons.

- Larger debt reduction will generate higher national savings and lower interest rates, which are conducive to long-term growth.

- A larger budget surplus will reduce the burden on the Bank of Canada to control inflation, and

- Given the government's determination to avoid deficits, a larger planned surplus provides a more adequate "cushion" against perverse fiscal

policies in the event of a recession, thereby permitting the automatic fiscal stabilizers to operate with full force.

On balance, we view the debt reduction shown in Table 6 as appropriate, and therefore must subtract these amounts from the projected fiscal dividend of the base case. As noted above, the larger debt paydown in the early years entails more room to manoeuvre in the later years because of reduced debt-servicing costs.

When the planned debt paydowns are subtracted from the fiscal dividend we arrive at our estimates of the amount available for additional tax reductions (or spending increases). The room for additional tax cuts is small in the first two years, reflecting the priority of debt repayment. But this room increases in the later years of the projection, reaching over $11 billion in 2004–05.

A Medium-Term Tax Reduction Plan

Given these projections, we believe that a medium-term tax reduction plan should be implemented. While reductions in personal income taxes will account for most of the reduction in tax revenues, it is important to include reductions in business taxes and payroll taxes in the tax reduction plan. As noted earlier, these are the taxes that have the strongest effects on efficiency and growth.

Reductions in EI payroll taxes will help to offset the adverse transitional effects of CPP/QPP payroll tax increases on employment. We have therefore allowed for five successive annual 15¢ reductions in the employee contribution rate, starting January 1, 2001. In fiscal 2004–05 this measure will cost about $5.1 billion.

A higher priority, from the standpoint of economic efficiency and growth, are reductions in business taxes. We believe that a significant reduc-tion in corporate taxes will facilitate the implementation of the recommenda-tions of the Technical Committee, as well as being desirable on their own. Following the February 2000 budget our tax reduction package therefore includes a seven percentage point reduction in the statutory rate for large non-manufacturing firms, to be phased in over five years. This reduction is over and above the rate reductions that could be financed by base-broadening measures. Upon full implementation, the annual *ex ante* cost of this measure would be almost $3 billion dollars. However, as the Technical Committee noted, a reduction in statutory corporate rates will likely increase the corporate tax base, thereby reducing the revenue loss. This measure would reduce the combined federal/provincial rate to about 36 per cent. Further

reductions could be made if the base-broadening reforms recommended by the committee were implemented. It should be possible to reduce the combined federal/provincial corporate rate to about 30 per cent without additional revenue losses.

We also include a reduction in the capital gains inclusion rate from three-quarters to two-thirds, in order to bring the typical top bracket marginal rate on realized capital gains in line with the effective marginal rate on dividends. This measure was implemented in the February 2000 budget.[16] The annual net revenue costs, which would begin in fiscal year 2000–01, would be about $0.3 billion per year on an *ex ante* basis. However, a reduction in capital gains taxes will likely stimulate realizations (Mintz and Wilson, 2000b) reducing the net revenue cost of this measure.

When the payroll, business and capital gains tax reductions are deducted from the total tax room, we derive the amount available for personal income tax reductions. As shown in Table 7, there is considerable room for PIT reductions within the five-year fiscal plan.

Allocating the Fiscal Dividend: Economic Effects

The current debate is about the allocation of the fiscal dividend. We have therefore chosen to model the economic effects of the particular combination of debt paydowns, spending increases and tax reductions described above relative to an alternative allocation. In the alternative, we have limited debt reduction to $3 billion per year, and have allocated *all* of the remaining potential surplus to non-taxable transfers to persons. This particular alternative was selected since it represented the base case used in the original fiscal dividend exercise.

We then implemented our recommended package of debt reduction, spending increase and tax reductions, reducing non-taxable transfer pay-ments dollar for dollar to "finance" these initiatives. We set monetary policy to maintain the price level approximately unchanged when our fiscal dividend allocation package is introduced.

[16]The inclusion rate was further reduced to one-half in the October 2000 Statement.

Table 7: A Recommended Tax Reduction Strategy ($ billion)

	Total Pre-Budget Fiscal Dividend	*Expenditure* Increases*	*EI Rate Cuts***	*Capital Gains & CIT Cuts*	*Room for PIT Cuts*	*Debt Reduction Targets*
2000–01	12.7	2.3	0.3	0.0	4.1	6.0
2001–02	16.5	2.7	1.5	0.6	5.7	6.0
2002–03	22.0	3.2	2.7	1.7	9.4	5.0
2003–04	28.6	3.4	3.9	2.5	14.8	4.0
2004–05	35.5	2.9	5.1	3.3	21.2	3.0

Notes: *These are the expenditure increases announced in (or immediately before) budget 2000 (including increases in the child tax benefit).
**This is in addition to the rate cut that went into effect in January 2000.

The results are presented in Table 8. As is apparent, the package has favourable effects on employment, productivity and real output. The composition of demand is shifted from consumption to investment, net exports and real government purchases of goods and services. As the package exerts a deflationary impact on prices, monetary policy is eased, with lower interest rates and a lower exchange rate. With investment stronger, the capital stock gradually increases. The federal government surplus is increased directly as a result of our higher debt reduction targets, and indirectly because of lower interest rates and stronger economic growth. In the final year of the analysis, the federal debt-GDP ratio is reduced by 1.4 percentage points relative to the alternative.

These economic and fiscal results in this illustrative simulation are due to three of the measures in our package.

- Higher debt paydowns, which provide more room for monetary easing;

- Business tax reductions, which stimulate investment; and

Table 8: Allocating the Fiscal Dividend: The TOTAL Package Starting in 2000FY
(impacts are percentage changes unless otherwise indicated)

	FISCAL YEARS				
	2000-01	*2001-02*	*2002-03*	*2003-04*	*2004-05*
Real Output and Components					
Real Gross Domestic Product	0.48	0.24	0.30	0.59	0.69
Consumption	-0.75	-1.26	-1.18	-0.78	-0.18
Government current and capital	2.02	1.42	1.38	1.17	0.63
Residential construction	1.77	1.99	0.57	1.06	1.13
Non-residential construction	1.06	1.84	1.93	2.20	2.44
Machinery and equipment	0.89	2.22	2.33	2.18	2.01
Exports	0.32	0.50	0.65	0.82	0.81
Imports	-0.25	-0.06	-0.13	-0.10	0.21
Prices, Productivity and Employment					
Implicit deflator for GDP	-0.09	-0.05	-0.06	-0.11	0.04
Consumer Price Index	-0.07	-0.04	-0.04	-0.11	0.01
Labour productivity	0.28	-0.04	0.10	0.28	0.23
Employment	0.21	0.27	0.20	0.31	0.46
Unemployment rate (% Pts)	-0.13	-0.16	-0.09	-0.16	-0.24
Profits and Capital Formation					
Pre-tax corporate profits	3.09	1.52	2.26	3.16	2.82
Capital stock	0.03	0.21	0.44	0.64	0.82
Money and Interest Rates					
90-day paper rate (% Pts)	-0.24	-0.15	-0.17	-0.23	-0.10
Industrial bond rate (% Pts)	-0.24	-0.15	-0.17	-0.24	-0.10
Exchange Rate and Balance of Payments					
Exchange rate	-0.40	-0.50	-0.70	-0.79	-0.79
Current account balance ($b)	1.66	2.10	3.31	3.85	2.40
Deficits and Debt					
Aggregate surplus/deficit ($b)	4.72	4.26	2.67	2.57	2.71
Federal surplus/deficit ($b)	4.36	4.19	2.63	1.94	1.10
Ratio of federal debt to GDP (% Pts)	-0.42	-0.76	-1.03	-1.25	-1.37

· Payroll tax cuts, which put downward pressure on unit costs (i.e., they are like a favourable supply price shock), permitting stronger growth without inflation.

The other components of the package — PIT cuts and increased government spending on goods and services — have very similar aggregate effects as non-taxable transfers. These results therefore serve to underline the importance of debt reduction and cuts in business taxes and payroll taxes if economic growth and productivity are to be enhanced.

The additional fiscal surplus generated by our recommended fiscal package is presented in Table 9. As shown, by fiscal year 2004–05 the federal surplus would be increased by about $1.1 billion. These additions to the surplus provide some insurance that debt reduction targets will be met. Alternatively, they can be viewed as providing the opportunity for additional fiscal initiatives in the later years of the projection.

While large potential surpluses have focused public attention on tax reductions, meaningful PIT reform could also entail significant base-

Table 9: Impact of Fiscal Package on Budget Surplus

Fiscal Year	*Debt Reduction Target*[a]	*Debt Reduction Result*[b]	*Additional Fiscal Surplus*
2000–01	6.0	7.4	1.4
2001–02	6.0	7.2	1.2
2002–03	5.0	5.6	0.6
2003–04	4.0	4.9	0.9
2004–05	3.0	4.1	1.1

Notes: [a]From Table 6, line 3.
[b]Federal surplus reported in Table 8, plus the $3 billion Contingency Reserve.

broadening,[17] which could finance even larger reductions in tax rates, or additional measures to improve equity and efficiency.

The macroeconomic analysis presented in this paper was carried out before the October 2000 Economic Statement and Budget Update. The additional PIT reductions announced in that statement would use up most of the estimated room for tax reductions shown in Table 6. On the other hand the federal budget surplus for fiscal 1999–2000 was $12.3 billion, about $9 billion higher than estimated in budget 2000. The federal budget surplus for fiscal year 2000–01 is $17.1 billion, about $13 billion higher than planned in budget 2000. Unless this improved fiscal position was wholly explained by transitory factors, the large surplus would provide additional room for new fiscal initiatives. In any case, the reduction in debt-service costs generated by the large surpluses of those two years will provide additional fiscal room.

Another factor clouding the picture is the deterioration of the near-term economic outlook in 2001. The slower growth experienced in the fourth quarter of 2000 and the first half of 2001 will likely reduce the federal surplus in fiscal 2001–02. However, the medium-term fiscal picture may not be significantly changed.

While the quantitative estimates provided in this paper are clearly subject to revision, our qualitative conclusions are unlikely to be affected. Consequently, we still recommend that the federal government establish a task force to evaluate the personal income tax. Like the Technical Committee's Report on Business Taxation, the report of this task force would provide the framework to guide further PIT initiatives over the medium term.

Conclusions

Our analysis suggests that the federal government should maintain its commitment to the five-year tax reduction plan and should implement this plan on a timely basis. While personal income tax cuts will take up most of the room for tax reductions, it is important to steadily reduce payroll and business taxes as well. Our simulations of a fiscal package involving significant debt reduction, modest spending increases and reductions in personal, business and payroll taxes, using the FOCUS macroeconometric model show that such a fiscal package should have favourable supply-side

[17] Above we mentioned replacing the $500,000 exemption for farmers and CCPCs with expanded access to RRSPs. Other possible base-broadening measures include the taxation of certain employee benefits, the elimination of age and pension credits, and the taxation of lottery and gambling winnings.

effects on output, employment and productivity over the medium term. Finally, there are still important issues of tax structure that need to be addressed. Consequently, we recommend that the government establish a task force to review personal income taxes and to consider the need for additional tax cuts.

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Table 2: Effective Tax Rate for Domestic Firms in G7 Countries, 1996, 2000 and 2001 (per cent)

Manufacturing	*Canada*	*U.S.*	*UK*	*Germany*	*France*	*Italy*	*Japan*	*Sweden*	*Ireland*	*(2)*	*(3)*
1996	23.5	23.8	19.4	38.0	25.3	31.6	31.6	14.4	4.2		
2000	23.5	23.6	17.2	34.4	23.2	18.1	22.6	14.4	4.2		
2001	23.4	23.6	17.2	21.1	23.2	18.1	22.6	14.4	4.2		
Intention in 2006	21.0							(2004)	5.3		
Services	*Canada*	*U.S.*	*UK*	*Germany*	*France*	*Italy*	*Japan*	*Sweden*	*Ireland*	*Ireland*	*Ireland*
1996	29.0	25.0	19.2	37.5	27.9	35.5	33.1	14.2	4.2	8.7	16.2
2000	29.0	24.8	17.2	34.0	25.8	21.4	24.0	14.2	4.2	5.6	11.3
2001	28.3	24.8	17.2	20.8	25.8	21.4	24.0	14.2	4.2	4.3	9.1
Intention in 2006	21.9							(2004)	5.3		

Notes: 1. To single out the tax impact, we assumed that the interest rate and inflation rate are 6.8 per cent and 1.4 per cent respectively across countries and periods.

2. The Canadian METR for the service sector in 2001 is corresponding, respectively, to the federal CIT rate of 28.12 per cent (including the 4 per cent surtax), combined with the weighted average provincial CIT rate of 14.15 per cent.

3. The German METR for 2001 reflects the federal CIT reduction from the current 40 per cent to 25 per cent, starting in January 2001. The municipal trade tax (16.66 per cent on average) and the solidarity surcharge (5.5 per cent) will still apply.

4. The general CIT rate in Ireland was 32 per cent in 1996, 24 per cent in 2000 and 20 per cent in 2001. A lower rate of 10 per cent is applicable for manufacturing and the international tradable service sector (i.e., financial service sector), to which a corresponding METR of 4.2 per cent is shown in Case (1). Case (2) is for hotel services which is subject to the general CIT rate but enjoys a higher tax depreciation rate of 15 per cent for hotel buildings. Case (3) is for other services which subjects to the general CIT rate and tax depreciation allowance.